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NOTES FROM PACIFIC COAST OBSERVATORIES.

The Orbits of ε *Hydræ,* AB, and of β 883.

By graphical methods orbits have been computed of AB of ε *Hydræ,* whose α for 1900.00 was $8^h\ 41^m$ and $\delta + 6° 47'$, and of β 883, whose α for 1900.00 was $4^h\ 5^m\ 40^s$ and $\delta + 10° 54'$.

The elements of ε *Hydræ* differ somewhat in node and inclination from those by Dr. Aitken in *Lick Observatory Bulletin* No. 36, but they fully represent the observations.

The elements of β 883 represent the observations as well as do those of Schoenberg, given in *Astronomische Nachrichten,* **178**, p. 187, 1908, and about as well as those of See, given in *Monthly Notices,* **58**, p. 566, 1908. The differences in the three sets of elements are due mainly to the difference in the weights given the observations. These differences may be regarded as a measure of the uncertainty still attaching to our knowledge of the true orbit of this system.

The elements of AB of ε *Hydræ* are:—

$T = 1901.11$
$P = 15.63$ years
$e = 0.69$
$a = 0''.267$
$\Omega = 122°.7$
$i = 63°.29$
$\omega = 259°.46$
$\mu = 23°.032$

THE EPHEMERIS.

Date.	θ	P	Date.	θ	P
1909.825	200°.96	0''.20	1915.825	294°.29	0''.15
1910.825	214 .65	0 .19	1916.825	42 .51	0 .04
1911.825	229 .59	0 .19	1917.825	124 .91	0 .17
1912.825	244 .79	0 .19	1918.825	137 .75	0 .23
1913.825	260 .03	0 .19	1919.825	146 .74	0 .25
1914.825	275 .57	0 .18	1920.825	155 .93	0 .25

My elements of β 883 are (with those by SCHOENBERG and by SEE for comparison):—

	MISS BROWN	SCHOENBERG	SEE
$P =$	16.6 years	16.90 years	16.6 years
$T =$	1907.2	1907.39	1907.33
$e =$	0.42	0.42	0.47
$a =$	0″.22	0″.21	0″.24
$\Omega =$	22°.0	54°.4	33°.5
$i =$	38°.72	16°.08	35°.7
$\omega =$	207°.96	172°.95	197°.3
$\mu =$	22°.401		

THE EPHEMERIS.

Date.	θ	ρ	Date.	θ	ρ
1909.84	343°.42	0″.19	1915.84	47°.36	0″.30
1910.84	10 .69	0 .21	1916.84	56 .35	0 .28
1911.84	12 .17	0 .26	1917.84	61 .68	0 .27
1912.84	21 .92	0 .28	1918.84	79 .33	0 .23
1913.84	32 .56	0 .30	1919.84	95 .89	0 .20
1914.84	39 .09	0 .30	1920.84	118 .04	0 .17

FLORENCE BROWN.

THE BRIGHTNESS OF THE SATELLITES OF *MARS*.

The statement is made in some recent textbooks on astronomy that *Phobos* and *Deimos,* the two small satellites of *Mars,* can be seen only with very large telescopes and *then only by screening the light from the planet.* A series of measures of these two satellites was made by me in September and October of the present year, and this gave me the opportunity to confirm my impression of the error of this statement. A large telescope is indeed required to show these tiny bodies, and they can be seen only when *Mars* is comparatively near opposition, but under good conditions it is then unnecessary to protect the eye from the light of the planet. *Phobos,* the inner satellite, is very decidedly the brighter of the two, and can be seen, with the 36-inch, in the full light of *Mars* when less than 3″ from the planet's limb. *Deimos* is fainter, and is a difficult object in the planet's light when 10″ from the limb. At distances greater than these limits both satellites are readily visible without screening the light from *Mars,* when the seeing is good. My estimates make *Phobos* fully six times as bright as *Deimos* when at the same distance from the planet; that is, about two stellar magnitudes brighter.

November 19, 1909. R. G. AITKEN.